

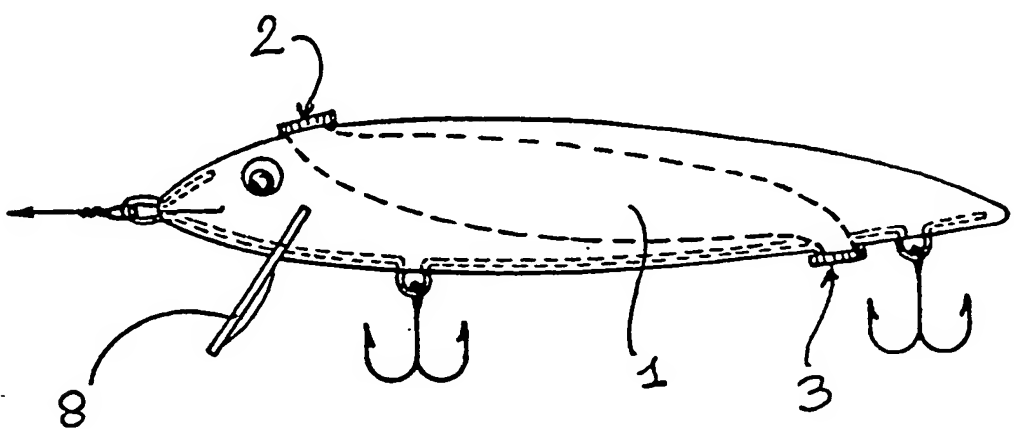
10/813753

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁴ : A01K 85/00	A1	(11) International Publication Number: WO 89/ 07393 (43) International Publication Date: 24 August 1989 (24.08.89)
(21) International Application Number: PCT/IT89/00007 (22) International Filing Date: 6 February 1989 (06.02.89) (31) Priority Application Number: 47629 A/88 (32) Priority Date: 11 February 1988 (11.02.88) (33) Priority Country: IT (71)(72) Applicant and Inventor: BUSETTI, Raffaello [IT/IT]; Via della Farnesina, 100, I-00149 Roma (IT). (74) Agent: MASCIOLI, Alessandro; A.N.D.I. - Associazione Nazionale degli Inventori, Via Urbana, 20, I-00184 Roma (IT). (81) Designated States: AT (European patent), AU, BE (European patent), CH (European patent), DE (European patent), FI, FR (European patent), GB (European patent), IT (European patent), JP, KR, LU (European patent), NL (European patent), SE (European patent),		US. Published <i>With international search report.</i>
(54) Title: AN ARTIFICIAL AUTO-PASTURING BAIT FOR THE DRAGGING FISHING		
		
(57) Abstract An artificial bait for the dragging fishing, having a shape similar to the already known dragging baits and being suited for delivering pasture, leaving the same down into the water during the dragging so as to attract the prey not only due to the external appearance and to the movement, but also due to the diffusion into the water of an odour trail.		

BEST AVAILABLE COPY

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	FR	France	ML	Mali
AU	Australia	GA	Gabon	MR	Mauritania
BB	Barbados	GB	United Kingdom	MW	Malawi
BE	Belgium	HU	Hungary	NL	Netherlands
BG	Bulgaria	IT	Italy	NO	Norway
BJ	Benin	JP	Japan	RO	Romania
BR	Brazil	KP	Democratic People's Republic of Korea	SD	Sudan
CF	Central African Republic	KR	Republic of Korea	SE	Sweden
CG	Congo	LI	Liechtenstein	SN	Senegal
CH	Switzerland	LE	Sri Lanka	SU	Soviet Union
CM	Cameroon	LU	Luxembourg	TD	Chad
DE	Germany, Federal Republic of	MC	Monaco	TG	Togo
DK	Denmark	MG	Madagascar	US	United States of America
FI	Finland				

- 1 -

"An artificial auto-pasturing bait for the dragging fishing"

5 The present invention concerns artificial auto-pasturing
baits for the dragging fishing. More in detail, the pre-
sent invention concerns artificial baits of various kinds
and shapes, similar to those already known in the field
of fishing, but also provided with the possibility of leav-
ing behind, when they are dragged, a pasture that conside-
10 rably increases the capacity thereof of attracting the prey.

It is already well known that the dragging fishing is a
kind of hobby fishing performed by dragging a bait, usual-
ly from a moving boat, so as to attract predatory species
15 by simulating little fishes, calamaries or other little
water animals which they eat. The bait for the dragging
fishing may sometimes be also a living fish which is
fastened to the end of the fishing line carrying the
hooks.

20 In further variants, there exists a wide range of arti-
ficial baits which more or less truly reproduce the sha-
pes and colours of the real fishes. One of these baits
is the one known as "small spoons", which are little me-
25 tal things having an elongated oval shape, more or less
similar to the one of a little fish, hollow (like a spoon)
so as to assure an undulating movement (or rotating, ac-
cording to the shape) when they are dragged in the water.

30 As the spoons are chromium-plated, in their movement they

- 2 -

reflect the light so that under water they may be easily be mistaken with little silvery fishes.

Another kind of artificial baits for the dragging fishing
5 consists of real imitations of little fishes out of plastic, rubber, wood etc., usually with bright, phosphorescent or iridescent colours for imitating the scales. Some of these little fishes are flexible because they are of rubber or soft plastic, and when they are dragged they
10 move the tail; others are realized in two or more rigid sectors coupled one to another by means of small rings so as to be jointed.

Furthermore, there are on the market many kinds of artificial
15 baits imitating little calamaries and similar, like those consisting of a tuft of feathers rotating on a little head, or those provided with fringes of soft plastic material being metalized or iridescent and, among these, those having their head rotating due to two or more
20 helicoidal external tabs which, being pushed by the water flow during the motion, impress to the head of the bait a rotation movement around their own axis.

It is obvious that the described baits attract the preys
25 due to their shape, the light emitted and the brightness of their colours, and to the fact that they seem to move like real fishes, thus being a mainly visible attraction.

- 3 -

It is however well known that fishes do not have a good sight, mainly due to the kind of habitat in which they live, which have very small transparency levels: consequently, the sight has a rather secondary function with respect to the other senses like, mainly, the one of the taste and of the smell and the one consisting of the so-called lateral line.

This last consists of a series of superficial longitudinal channels, communicating with the outside, and through which the fish may sense the pressure and the vibrations of the water: through this sense the fish notices the movements of other fishes, and it seems that it is able to distinguish the movement of a prey in anguish.

Therefore, it can be understood why a living bait is to be considered more successful than a dead or an artificial one.

However, the most developed sense in fishes seems to be the smell, through which the fish can perceive also very diluted odours, or those being far away. This organ, which in fishes is totally separated from the breathing one, is placed in two bags placed in the front part of the snout and through which the water flows, entering from the one and getting out from the other and just touching on its way the real smelling organ.

- 4 -

Exploiting the rather developed smelling of fishes, some kind of fishings use the so-called "pasturizing", which consist of diffusing in the water all around the fishing place, determined substances (or pastures) that attract the prey due to the odour that stimulates the hunger thereof.

The pastures may consist of any kind of material stimulating for the fish, being an alimentary call; usually they are a mixture of pulverized fishes (usually sardines or crayfishes), flours of various cereals or of hemp, pulverized toasted bread, pulverized milk, sugar and various aromatizers even with cheese taste, of flavours, of cherries or vanille, etc. Also liquid pastures are used, consisting e.g. of fish oils; furthermore there are also already prepared and formulated pastures on the market.

It is the aim of the present invention to exploit the advantageous technique of pasturizing also for the dragging fishing where, due to the constant moving, the fishing place is not always the same.

The aim set forth is reached, according to the present invention, by supplying already known artificial baits (which may have the shape of a fish, of a calamary or of a small spoon) with the further capacity of attracting the prey by delivering pasture, realizing artificial baits having the external shape similar to those already used, but which

- 5 -

furthermore contain a determined quantity of liquid, solid or doughy pasture, suitable for delivering the same gradually into the water when they are dragged, leaving behind them an odour trail that attracts the fish also from long distances, thus being summed to the call given by the external shape and by the movement.

The main principle of the present invention may be realized supplying an artificial bait with a cavity suitable for containing the pasture and appropriate openings for introducing the same and for having it get out when the bait is dragged in the water, or also realizing only one part of the artificial bait with appropriate systems for coupling thereto or housing therein one portion realized with preshaped solid pasture that will gradually solve in the water, or also realizing one-use baits already comprising the pasture like, e.g., vesicular or bag containers of the kind "use and throw away" already filled with pasture, or blocks of solid mixed material containing pasturizing substances having the shape or a fish or similar.

Therefore, the object of the present invention consists of an artificial bait for the dragging fishing, characterized in that it is provided with an internal cavity that will contain a determined quantity of pasture, and openings for the loading and delivering of the pasture. In particular,

- 6 -

the bait may have the shape of a fish, internally hollow, with a loading opening near the head and one or more delivery openings.

- 5 Through the loading opening, which preferably is adjustable and has a passage light that may be varied in amplitude, the pasture in form of a dough, of a solid or liquid mixture, is introduced inside the cavity, and when the artificial fish is dragged in the water, said pasture gets
10 out through one or more apposite openings, leaving a trail or odour behind the bait.

- The loading opening is preferably placed near the head so that it may be exploited also for allowing the entrance of
15 the water inside the bait, so that the pasture may be solved and pushed towards the delivery openings. For further improving the diffusion of the water entering in the pasture mass, a small pierced tube may be provided inside the cavity, connected to the loading opening, having the function of water distributor.
20

- The artificial bait described may have a single delivery outlet being preferably adjustable, near the tail, or even it may show an opening provided with an ejection device of
25 the Venturi kind, that "sucks" the pasture (obviously liquid) towards the outside due to the water flow being in movement with respect to the bait.

In a variant, the hollow bait in the shape of a fish may

- 7 -

be realized in a very flexible plastic material or in rubber, as the delivery outlets consist in a series of transversal openings placed on the two sides of the body of the fish.

5

It is a further specific object of the present invention an artificial bait for the dragging fishing, characterized in that it comprises a support part that may be re-used, and that may be coupled with one part realized of solid watersolving material containing pasturizing substances. Said second part practically consists of a block or "bread" of pasture mixed with a watersolving (and eatable substance).

15 In particular, that part that can be re-used comprises a hollow head of a fish or a calamary, to which eventually iridescent or metalized, soft plastic fringes may be jointed. The head of the calamary may be rotating, like the one of already known baits.

20

To this hollow head a cage structure may be hinged, showing the back part of the body of a fish, that may be opened by rotation of the two sections thereof around the hinges, so as to house inside thereof a block of watersolving solid material of the already described kind.

25

It is furthermore object of the present invention a artificial bait for the dragging fishing, characterized in that

- 8 -

it contains pasturizing substances. In particular, said bait may consist of a preshaped block having the shape of a fish or a solid pasture material like the one already mentioned, or it may be a one-use, vesicular or bag container full of pasture, being of elongated shape, imitating a fish or a small spoon. The container may be a sheet of plastic material eventually iridescent or metalized, and it may contain liquid pasture. In this case it will be necessary to pierce the container before use, possibly with a small hole near the "head", and another one near the the.

In a further variant, the one-use container may consist of a layer of filtrating or pierced material, and it may be filled with watersolving, solid pasture.

The present invention will be now described hereinbelow; for exemplifying and not limitative purposes, making reference to the attached drawings, in which:

figure 1 shows a lateral elevated view of a first embodiment of the bait according to the present invention;

figure 2 shows a part top view in enlarged scale of the bait of figure 1;

figure 3 shows a lateral elevated view of a second embodiment according to the present invention;

- 9 -

- figure 4 shows a lateral elevated view of a third embodiment according to the present invention;
- figure 5 shows a lateral elevated view of a fourth embodiment according to the present invention;
- 5 figure 6 is a part section, top view of the bait of figure 5;
- figures 7, 9 and 10 show three lateral elevated views of a fifth embodiment of the bait according to the present invention, assembled in a different way;
- 10 figure 8, shows a cross view of the bait of figure 7;
- figure 11 shows a cross section view of the bait of figure 10;
- figure 12 shows a lateral elevated view of a sixth embodiment according to the present invention;
- 15 figure 13 shows a cross section view of the bait of figure 12;
- figure 14 shows a lateral elevated vies of a seventh embodiment according to the present invention;
- figure 15 shows a lateral elevated view of an eighth embodiment according to the present invention; and
- 20 figure 16 shows a lateral elevated view of a ninth embodiment according to the present invention.

Figures 1 to 16 show various embodiments according to the present invention in which the artificial bait, out of any suitable material, has the aspect of a little fish and is

25

- 10 -

internally hollow so that the pasture may be housed the-
reinside.

In the variant according to figure 1, the internal cavity
5 1 is shown, as well as the loading opening 2 and the one 3
for delivering the pasture. Both openings are adjustable,
being provided with a rotating closing device, more clear-
ly shown in figure 2, in which the passage lights may be
varied bringing the holes of the external nut 4 in major
10 or minor coincidence with those of the internal part 5.

It is obvious that, according to the pasture to be used,
to the dimension of holes 2 and 3 and to the realization,
the adjustable devices may have different shapes, or also
15 be completely absent.

When liquid pastures are used, a filling with absorbing
material may be provided inside cavity, like e.g. a spon-
ge that absorbs the products and gradually releases it.
20 Or also, two absorbing tampons may be provided near the
two openings which appropriately limit the water inlet
and the pasture outlet without requesting adjustable clos-
ing devices.

25 In figure 3 a further variant of the bait according to
the present invention is shown, in which to a delivery
opening 3 an ejection device 6 of the Venturi kind is
coupled which, due to the water flow during the motion,

- 11 -

extracts the (liquid) content of cavity 1. 7 shows a further possible delivery outlet for the pasture, while 8 shows the sinker, already present in many kinds of baits.

5 The embodiment of figure 4 is provided with a small pierced tube 9 that facilitates the water distribution inside the pasture mass contained in cavity 1, which the embodiment of figure 5 and 6 is out of soft plastic or rubber, with a loading opening 2 of the kind of those already mentioned, and a series of delivery openings 10 consisting of
10 vertical fissures placed along the body of the fish. Preferably the fissures, provided with an edge 11 projecting like a tab, are placed offsett on the two sides of the body so as to facilitate an ondulatory movement of the
15 bait during the dragging.

In figures from 7 to 11 a kind of artificial bait is shown already provided with pasture which, due to its features, may be one-use. It is a vesicular container, e.g. of a
20 metalized plastic sheet, imitating the shape of a small spoon (like those shown with 12 in figures 9, 10 and 11), and it is filled up with pasture. Such an article may be, .g., used all alone, instead of the the small spoon, as shown in figures 7 and 8. An internal small steel wire 13
25 may be provided internally, connected with the two eye-lets 14 and 15. If the container of the bait is out of plastic material it will be necessary, before use, perform

- 12 -

some holes as shown in 16 and 17. In a further variant, the container may be filtrating or pierced, with a solid watersolving pasture that may be released only by putting the bait into the water.

5

The same kind of bait may also be assembled as shown in figures 9 and 10, i.e. together with the real little spoon. In the first case the bait according to the present invention is placed on the end part of the fishing line 18, upstream of the spoon 12, having a pulley 19 interplaced eventually a section of the fishing line 18. During the dragging the tension of the fishing line passing through the two eyelets 14 and 15 of the bait favours the emptying of the last one.

15

In the disposition of figures 10 and 11 the bait according to the present invention is assembled, by means of eyelets 14 and 15, directly above the spoon 12.

20

A further kind of artificial bait already containing pasture, shown in figures 12 and 13, consists in a preformed block of solid mixed material containing pasturizing substances and an eatable watersolving mixture, e.g. fish glue. The mixture may be provided with any kind of coloured or silvered parts, like those used for preparing cakes. When the block is placed into the water and dragged, it gets slowly consumed and solved in the water. In

25

- 13 -

the variant shown, the bait is hooked in the end part of fishing line 18 by means of said hooks 20 passing, together with the fishing line, in throat 21 and in channel 22 provided in the preshaped block.

5

In figures 14 and 16 kinds of baits are shown in which one part can be re-used, of plastic material or similar, and the other one consists of a block of pasture like the one described in figure 12. It may be for example the head
10 of a fish 23, provided with fringes 24 in soft iridescent plastic, being phosphorescent or metalized, in which a solid preshaped block 25 may be inserted containing pasture so as to build the rest of the fish's body, or also a rotating head 26 of a calamary, of the already known kind, the
15 pasture block 25 being assured to the rest of the bait with the same system of hooks 20, throat 21 and channel 22 already shown in figure 12.

In a last example, in figure 16, an artificial bait is
20 shown consisting in a fish's head 27 to which a cage structure 28 is hinged: the small cage, divided in two sections, is kept closed by hook 20 inserted into eyelet 29, and may house a block of solid material containing pasturizing substances of the kind described in the precedent figures.

25

It shall be underlined that the bait of figure 16 may be also used together with a real fish that could be closed, living or dead, into the small cage.

- 14 -

CLAIMS

1. An artificial bait for the dragging fishing characterized
in that it has an internal cavity suitable for containing
5 a predetermined quantity of pasture, and openings for the
loading and delivering said pasture.
2. An artificial bait according to claim 1, having the shape
of a fish being internally hollow, showing an opening for
10 loading the pasture near the head, and one or more delivering
openings.
3. An artificial bait according to claim 1, in which said
loading opening will allow the controlled water inlet during
15 the dragging of the bait.
4. An artificial bait according to claim 3, in which said
loading opening is adjustable having a passage light that
may be set.
20
5. An artificial bait according to claim 4, in which said
loading opening is connected to a small pierced tube provided
internally of said cavity, for the distribution inside the
pasture mass of the water entering from said loading
25 opening during dragging.
6. An artificial bait according to anyone of claims 2 - 5, having
a delivery outlet near the tail.

- 15 -

7. An artificial bait according to claim 6, in which said delivery outlet is adjustable having a passage light that may beset.
- 5 8. An artificial bait according anyone of claims 2 - 5, having a delivery outlet provided with an ejection device of the Venturi kind.
9. An artificial bait according to any of claims 2 - 5,, being of flexible plastic material, in which said delivery outlets consist of vertical openings placed on the two sides of the body of said fish.
- 10 10. An artificial bait for the dragging fishing, characterized in that it comprises one part of the support that may be used again when coupled with one part of solid, watersolving material containing pasture.
11. An artificial bait according to claim 10, in which said part that can be used again comprises a part having the shape of a fish head or of a hollow calamary, and the remaining part of the body being of said solid watersolving material containing the pasture.
- 20 12. An artificial bait according to claim 11, in which said head of the calamary is rotating.
- 25 13. An artificial bait according to claims 11 or 12, in which

- 16 -

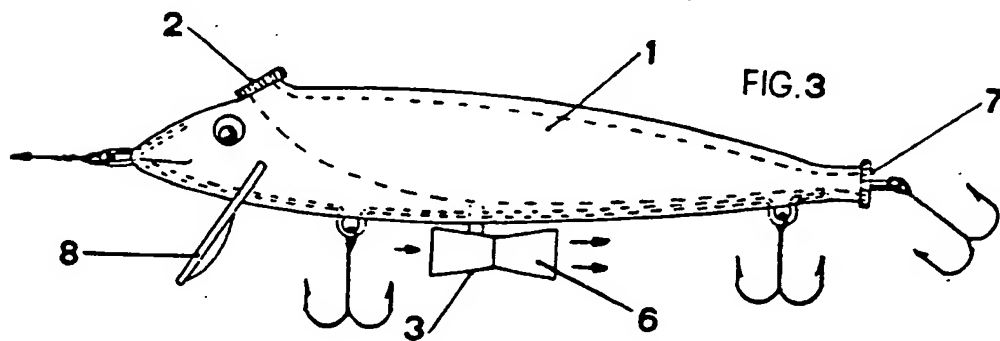
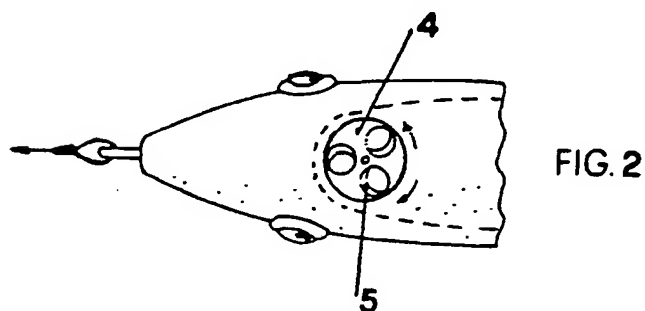
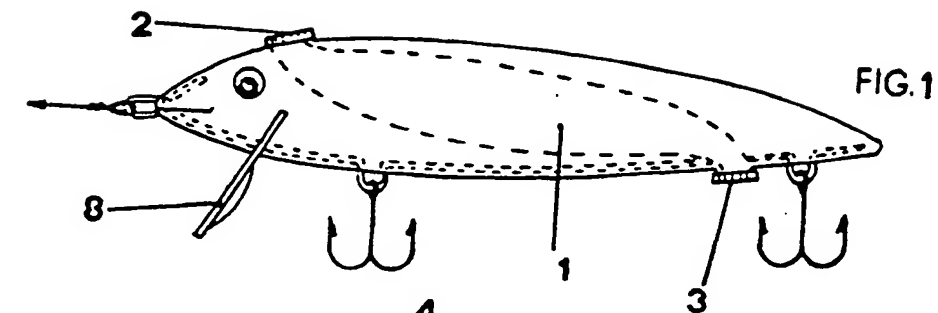
said part that can be used again comprises furthermore fringes that imitate tentacles, joint to said head.

14. An artificial bait according to claim 11, in which said head is hollow and hinged on a small cage structure having the shape of the back part of the fish's body, and that may be opened by rotating the two sections thereof around the hinges, suitable for housing inside thereof that part of watersolving, solid material containing the pasture.
15. An artificial bait for the dragging fishing, characterized in that it contains pasture.
16. An artificial bait according to claim 15, consisting of a pre-shaped block having the shape of a fish, of solid watersolving material containing pasturing substances, provided with means for the coupling to the end part of the fishing line carrying the hooks.
17. An artificial bait according to claim 15, consisting of a one-use vesicular or small bag container being full of pasture, having an elongated shape for imitating a fish or a small spoon.
18. An artificial bait according to claim 17, in which said vesicular container consists of a sheet of metalized

or iridescent plastic sheet being full of liquid pasture that will be delivered into the water after a suitable piercing.

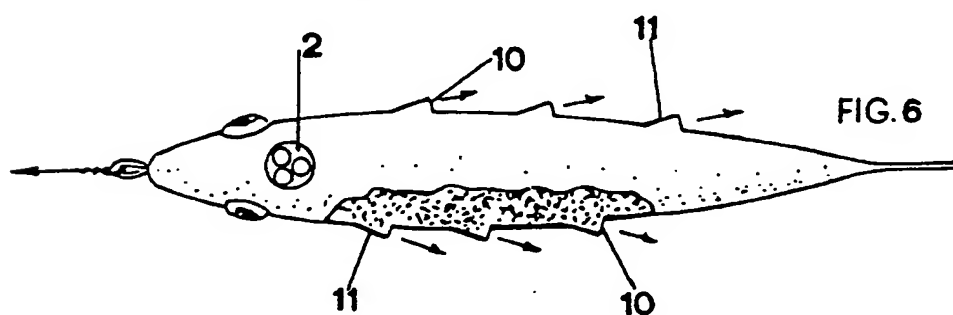
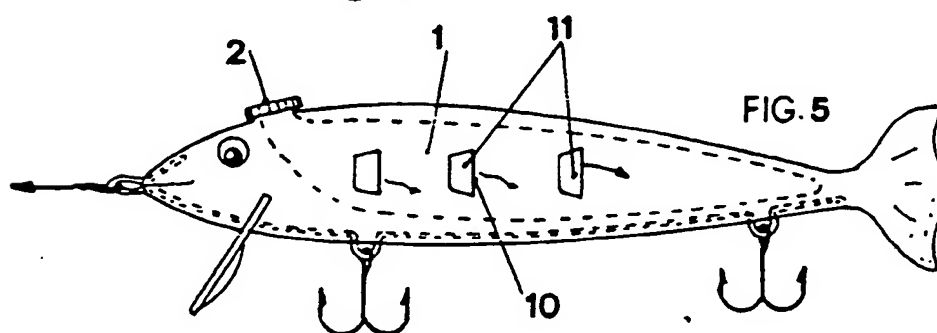
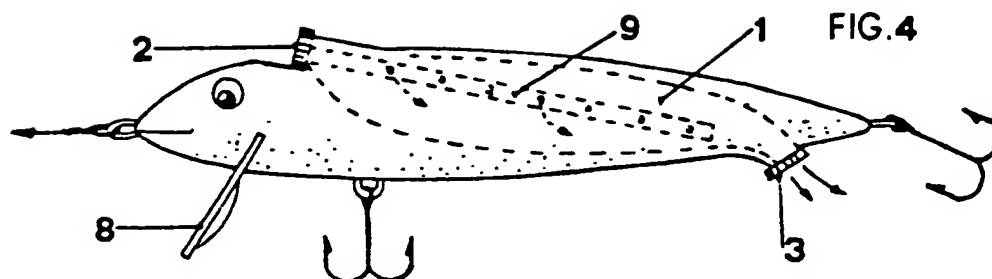
- 5 19. An artificial bait according to claim 17, in which said vesicular container consists of a filtering or pierced sheet, and is full of solid watersolving pasture.
- 10 20. An artificial auto-pasturing bait for the dragging fishing according to claims 1 - 19, according to what hereinbelow described and shown.

- 1 / 5 -



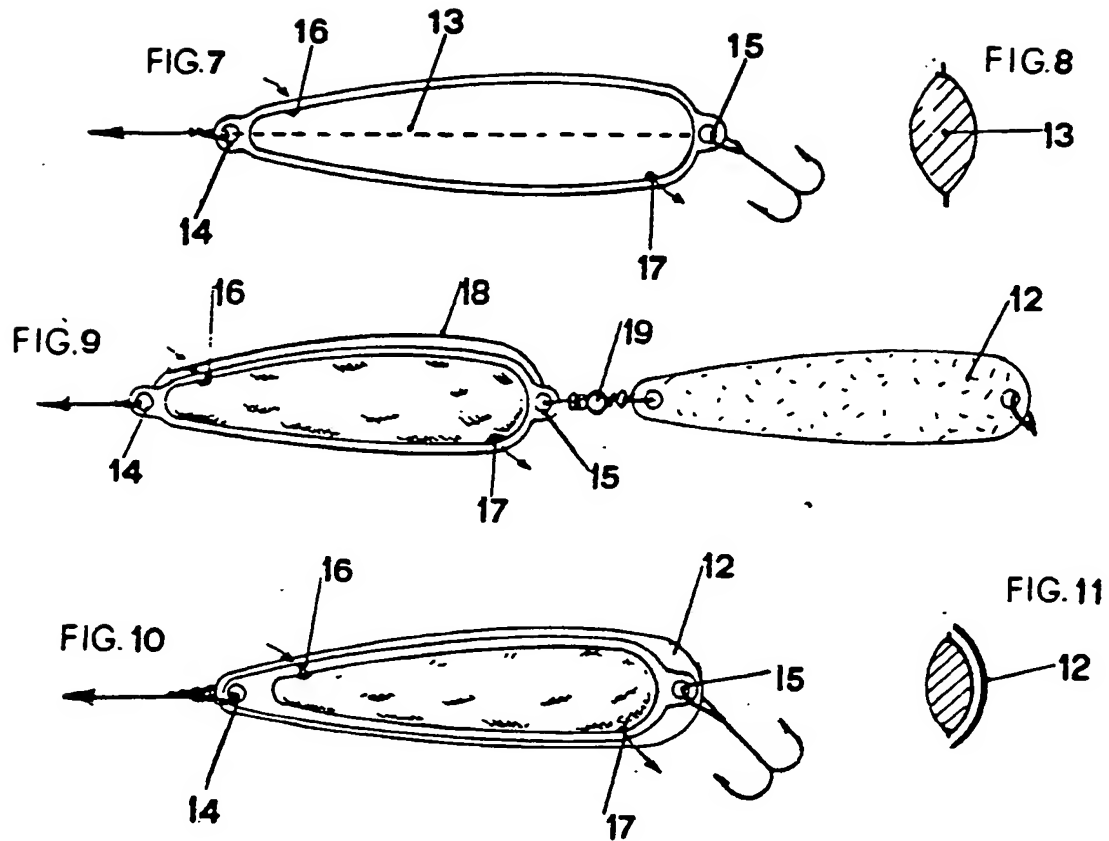
SUBSTITUTE SHEET

- 2 / 5 -



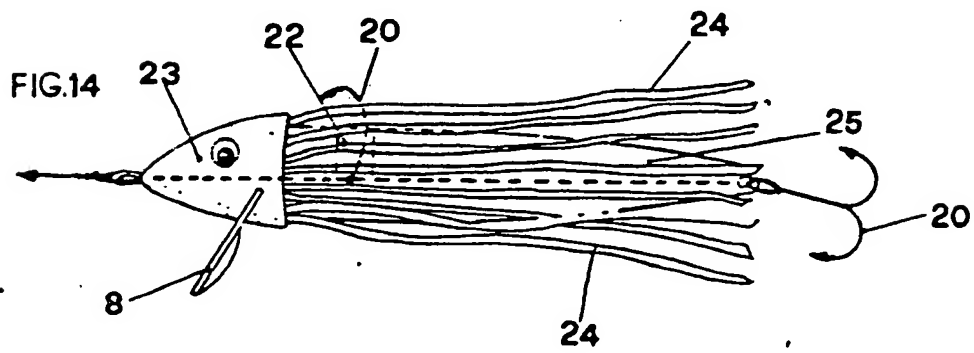
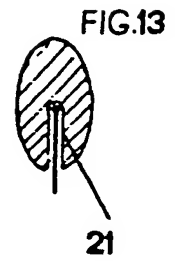
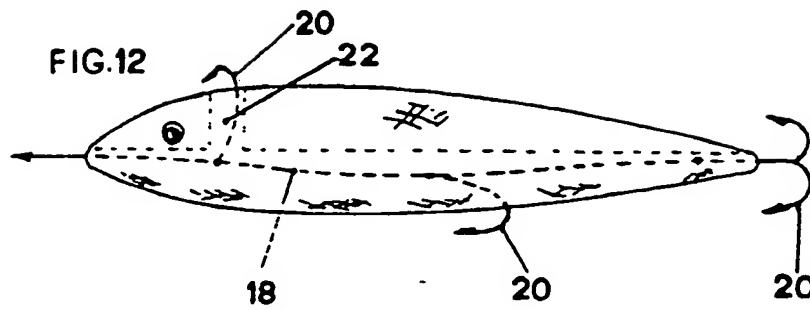
SUBSTITUTE SHEET

- 3 / 5 -



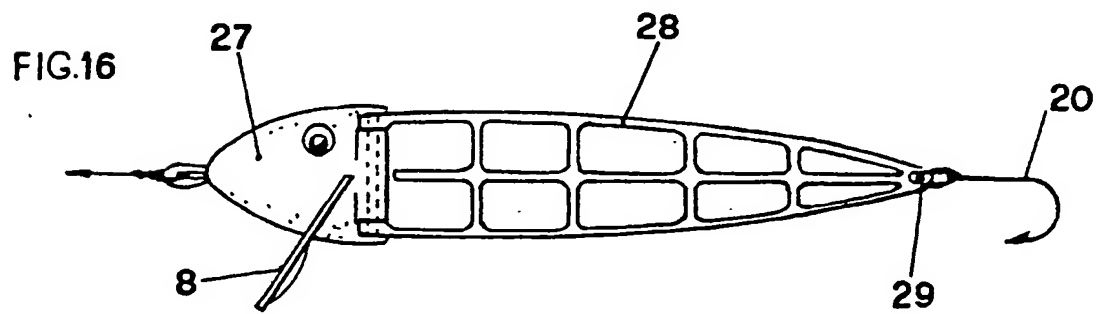
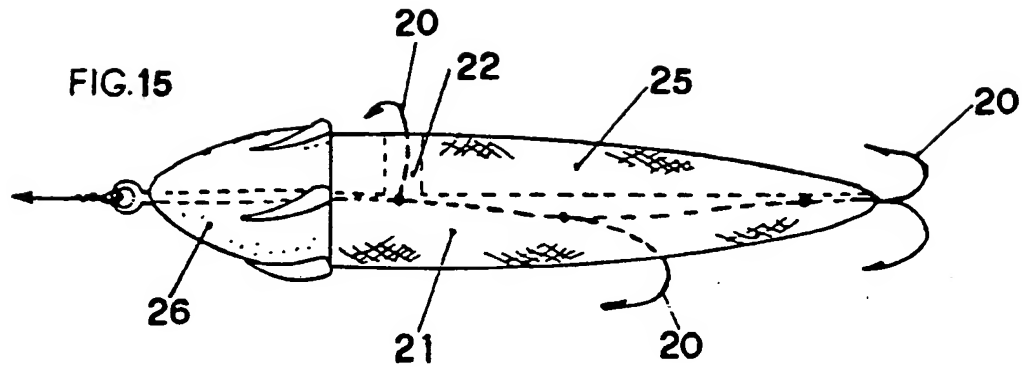
SUBSTITUTE SHEET

- 4 / 5 -



SUBSTITUTE SHEET

- 5 / 5 -



SUBSTITUTE SHEET

INTERNATIONAL SEARCH REPORT

International Application No PCT/IT / 89/ 00007

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC		
Int.Cl. 4 A01K85/00		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
Int.Cl. 4	A01K	
Documentation Searched other than Minimum Documentation to the extent that such Documents are included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹		
Category ^o	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
X	WO,A,8600499 (LIC.TALALMANYOKAT ERTEKESITO ES INNOVACIOS KULKERESKEDELMI_VALLALAT) 30 January 1986 see page 9, line 6 - page 16, line 16; figures 6-9 <div style="text-align: center;">---</div>	1, 2, 15
X	US,A,2769268 (MILLER) 06 November 1956 see the whole document <div style="text-align: center;">---</div>	1-4, 6, 7, 15
X	US,A,2674058 (LINDENBERG) 06 April 1954 see the whole document <div style="text-align: center;">---</div>	1, 5, 6, 15
X	US,A,3273277 (VALENTINE) 20 September 1966 see the whole document <div style="text-align: center;">---</div>	1, 2, 15, 17, 18, 19
X	FR,A,1215864 (PILLEUX) 21 April 1960 see the whole document <div style="text-align: center;">---</div>	1, 10, 11, 15, 16
--- -/-		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>^o Special categories of cited documents: ¹⁰</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p> </div> </div>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search <div style="text-align: center;">04 APRIL 1989</div>		Date of Mailing of this International Search Report <div style="text-align: center;">- 3. 05 89</div>
International Searching Authority <div style="text-align: center;">EUROPEAN PATENT OFFICE</div>		Signature of Authorized Officer <div style="text-align: center;">VERDOODT S.J.M. </div>

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)

Category *	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.
X	FR,E,076349 (PILLEUX) 28 August 1961 see the whole document	1, 10, 11, 15, 16
X	US,A,3971152 (HUSSON) 27 July 1976 see the whole document	1, 10, 11, 13
X	US,A,3844060 (KURACHI) 29 October 1974 see the whole document	1, 14, 15
A	US,A,3969840 (CHARRON) 20 July 1976	
A	US,A,4553348 (COOPER) 19 November 1985	
A	FR,A,1150413 (RAGOT) 13 January 1958	
A	US,A,4589223 (HASTINGS) 20 May 1986	
A	DE,A,1908925 (LAAHS) 03 September 1970	
A	US,A,3835572 (MOUNSEY) 17 September 1974	
A	US,A,3688430 (BALCH) 05 September 1972	
A	US,A,4205476 (HSU) 03 June 1980	

**ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO.**

PCT/IT 89/00007

SA 26766

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information. 04/04/89

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO-A-8600499	30-01-86	EP-A- 0188500	30-07-86
US-A-2769268		None	
US-A-2674058		None	
US-A-3273277		None	
FR-A-1215864		None	
FR-E-076349		None	
US-A-3971152	27-07-76	None	
US-A-3844060	29-10-74	None	
US-A-3969840	20-07-76	None	
US-A-4553348	19-11-85	None	
FR-A-1150413		None	
US-A-4589223	20-05-86	CA-A- 1232539	09-02-88
DE-A-1908925	03-09-70	None	
US-A-3835572	17-09-74	GB-A- 1401796 CA-A- 977146	30-07-75 04-11-75
US-A-3688430	05-09-72	None	
US-A-4205476	03-06-80	None	

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.